

CLAIMS

1. A carboxyl group-containing polyester polyol liquid at ordinary temperature, having a number-average molecular weight of 550 to 950 and being obtainable by ring-opening polymerization of ϵ -caprolactone to a compound represented by the formula:



wherein R is an alkyl group containing at least 2 carbon atoms.

2. A carboxyl group-containing polyester polyol liquid at ordinary temperature, according to claim 1, wherein the compound represented by the formula (1) is dimethylol butanoic acid.

3. A water-dispersible polyurethane resin, which is obtainable by reacting a polyisocyanate compound with a polyol component comprising the carboxyl group-containing polyester polyol liquid at ordinary temperature according to claim 1 or 2, and contains a carboxyl group neutralized with a basic substance within the molecular chain.

4. A water-dispersible polyurethane resin according to claim 3, which contains the carboxyl group in an amount of 0.4 to 5% by weight in the solid content of the water-dispersible polyurethane resin.

5. A water-dispersible polyurethane resin according to claim 3 or 4, wherein the water-dispersible polyurethane resin has a number-average molecular weight of 6,000 to 500,000.

6. A process for producing a water-dispersible polyurethane resin, which comprises neutralizing, with a basic substance, carboxyl, group or groups of a water-dispersible polyurethane resin obtainable by reacting a polyisocyanate compound with the carboxyl group-containing polyester polyol liquid at ordinary temperature according to claim 1 or 2, to disperse or dissolve the resin into water; and chain-extending the polyurethane resin with a chain-extender.

7. A process for producing a water-dispersible polyurethane resin, which comprises reacting a polyisocyanate compound with a polyol component comprising the carboxyl group-containing polyester polyol, liquid at ordinary temperature according to claim 1 or 2 to prepare a urethane prepolymer having terminal NCO groups; neutralizing, with a basic

substance, carboxyl group or groups of the prepolymer to disperse or dissolve the prepolymer into water; and chain-extending the prepolymer with a chain-extender.

8. A water-dispersible polyurethane resin obtainable by the production process according to claim 6 or 7.